A 57.46/9:986/4

APR

United States Department of Agriculture

Soil Conservation Service

Colorado · New Mexico Water Supply Outlook

April 1, 1986

COMPLETED ORIGINAL
25

C.M.

BEST COPY AVAILABLE

Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave, Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado	2490 West 26th Ave, 3d Fl, Denver CO, 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
New Mexico	517 Gold Ave, SW, Room 3301, Albuquerque, NM 87102-3157
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave, 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

BEST COPY Available

Colorado–New Mexico Water Supply Outlook

and

Federal – State – Private Cooperative Snow Surveys

Issued by

Wilson Scaling
Chief
Soil Conservation Service
Washington, D.C.

Released by

Sheldon G. Boone
State Conservationist
Soil Conservation Service
Denver, Colorado

Ray T. Margo Jr.
State Conservationist
Soil Conservation Service
Albuquerque, New Mexico

Prepared by

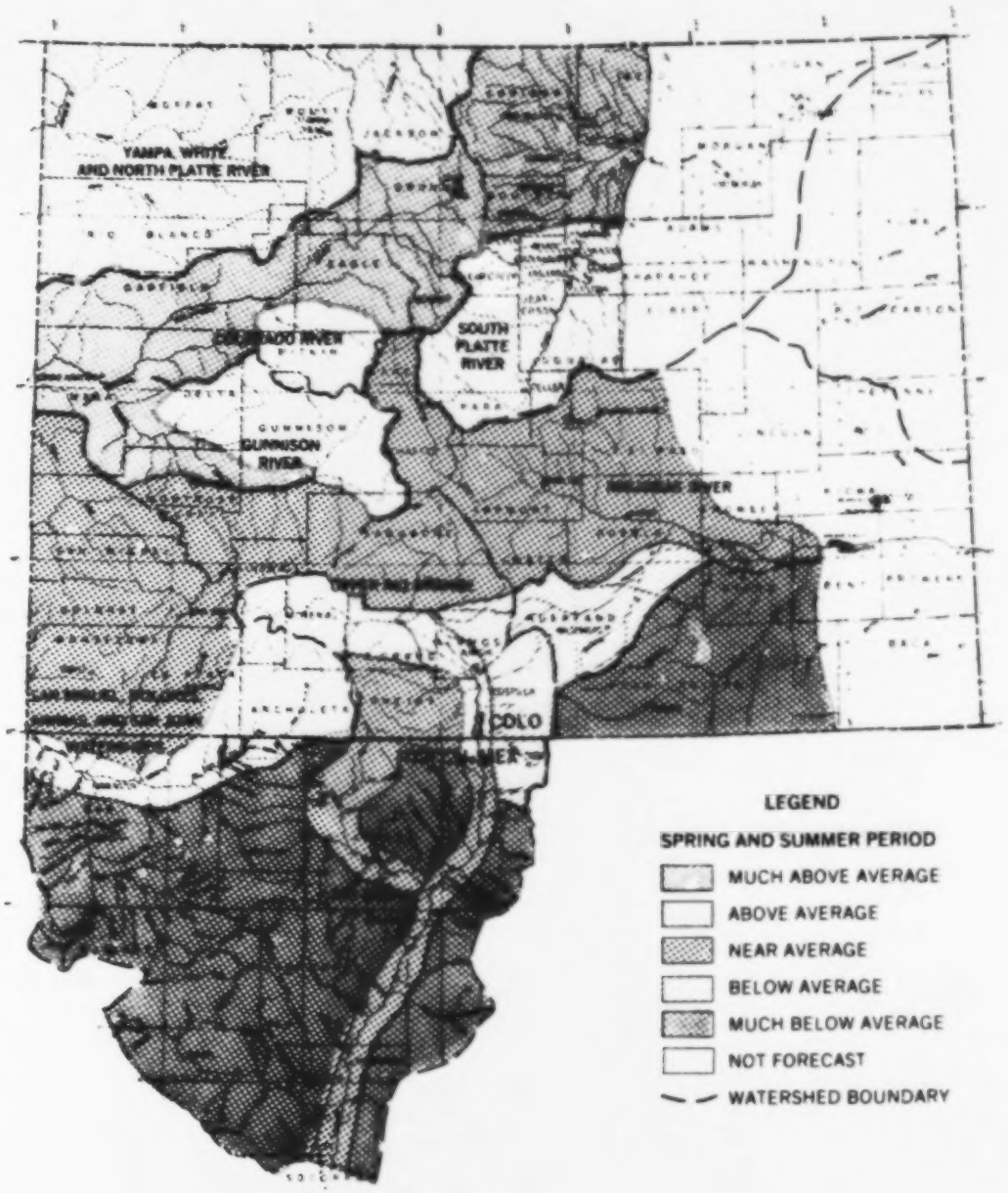
Garry Schaefer
Snow Survey Supervisor
Soil Conservation Service
2490 W. 26th Ave., 3d floor
Denver, Colorado

"Programs and assistance of the United States Department of Agriculture are available without regard to race, creed, color, sex, age, or national origin."

BEST COPY AVAILABLE

U S DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE



STREAMFLOW PROSPECTS
COLORADO

0 25 50 75 100 MI

0 50 100 150 KM

SOURCE Data compiled by SCS Field Personnel

2

AUGUST 4 R 39356

GENERAL OUTLOOK:

SUMMARY:

MARCH WAS ANOTHER RELATIVELY WARM, DRY MONTH. IN THE MOUNTAINS, SNOWFALL INCREMENTS DURING THE MONTH WERE BELOW AVERAGE THROUGHOUT COLORADO AND NORTHERN NEW MEXICO. THE MOST SIGNIFICANT ITEM OBSERVED THIS MONTH, WAS THE BEGINNING OF THE MELTING PROCESS IN THE SNOWPACK. THIS WAS OBSERVED AT SEVERAL AUTOMATED SNOTEL STATIONS THROUGHOUT COLORADO AND NEW MEXICO. THE ELEVATION RANGE OF THESE SNOTEL SITES WAS FROM 8,000 FEET TO 11,000 FEET. THIS MAY BE A SIGNIFICANT INDICATION OF AN EARL SEASON RUNOFF CONDITION.

SNOWPACK:

STATEWIDE SNOWPACK STATISTICS FOR COLORADO AND NORTHERN NEW MEXICO ARE 104% OF AVERAGE AND 58% OF AVERAGE, RESPECTIVELY. THESE FIGURES DO NOT INCLUDE THE MAJOR SNOW STORM THAT OCCURRED ON APRIL 2-3, 1986. THIS STORM PRODUCED 1 INCH TO 4 INCHES OF SNOW WATER IN NORTHERN NEW MEXICO, SOUTHERN COLORADO, AND ALONG THE FRONT RANGE IN COLORADO. THIS ADDITIONAL SNOWPACK WOULD INCREASE THE STATEWIDE TOTALS 5% TO 10%. THE HIGHEST BASIN SNOWPACK IN COLORADO OCCURS IN THE LARAMIE RIVER BASIN AT 38% ABOVE AVERAGE. SNOWPACK ALONG THE SOUTH PLATTE BASIN IS 13% ABOVE AVERAGE. THE LOWEST SNOWPACK EXISTS IN THE ARKANSAS BASIN, AND IS 85% OF AVERAGE AND 78% OF LAST YEAR. THE HIGHEST SNOWPACK IN THE NORTHERN PORTION OF NEW MEXICO OCCURS IN THE HEADWATERS OF THE RIO CHAMA AT 76% OF AVERAGE, AND THE LOWEST IS IN THE PECOS AND RED RIVER DRAINAGE.

PRECIPITATION:

LOW ELEVATION PRECIPITATION OVER MUCH OF COLORADO WAS BELOW AVERAGE DURING MARCH. THIS WAS THE SAME GENERAL TREND THAT MUCH OF THE MOUNTAIN AREAS OBSERVED. GUNNISON RECEIVED 14% OF ITS TOTAL PRECIPITATION FOR THE MONTH, THE LOWEST IN THE STATE, WHILE WALDEN RECEIVED 125% FOR THE MONTH, WHICH WAS THE HIGHEST IN THE STATE. LOW ELEVATION PRECIPITATION IN NEW MEXICO RANGED FROM A LOW OF 26% OF AVERAGE FOR THE MONTH AT JEMEZ SPRINGS, TO A HIGH OF 126% OF AVERAGE AT CUBA.

BEST COPY AVAILABLE

RESERVOIRS:

COLORADO'S RESERVOIR STORAGE REMAINS EXCELLENT. THE CURRENT STATEWIDE TOTAL IS 52% ABOVE AVERAGE, AS INDEXED BY 69 RESERVOIRS. THIS IS 66% OF CAPACITY. THE ARKANSAS RIVER BASIN HAS THE HIGHEST PERCENT OF STORAGE AT NEARLY 4 TIMES ITS NORMAL. THIS IS 64% OF CAPACITY. THIS STORED WATER COULD BE USED TO SUPPLEMENT ANY BELOW NORMAL STREAMFLOWS THAT COULD OCCUR LATE IN THE SUMMER. RESERVOIR STORAGE IN NEW MEXICO IS 412% OF AVERAGE AND 80% OF CAPACITY. BECAUSE STREAMFLOW VOLUMES ARE FORECASTED TO BE BELOW NORMAL, THIS STORED WATER WILL BE OF GREAT IMPORTANCE TO SUPPLEMENT ANY DEFICIENCIES.

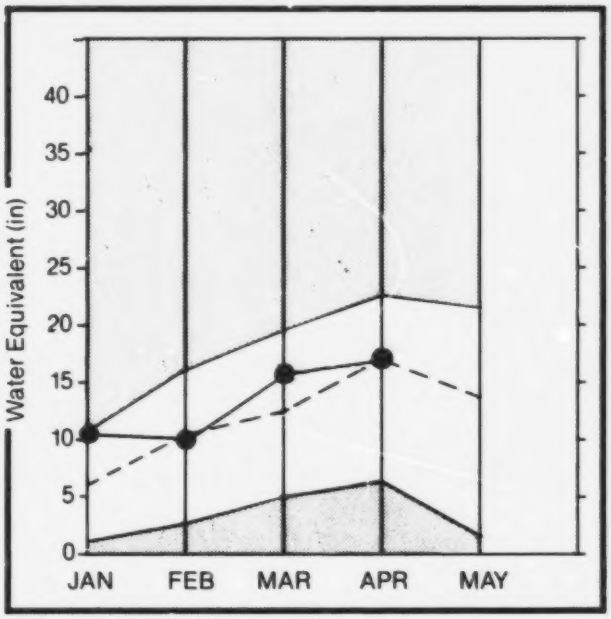
STREAMFLOW:

STREAMFLOW VOLUMES FROM AROUND COLORADO, RANGE FROM A HIGH OF 54% ABOVE AVERAGE FOR WILLOW CREEK INFLOW TO WILLOW CREEK RESERVOIR, TO A LOW OF 66% OF AVERAGE FOR CULEBRA CREEK AT SAN LUIS AND PURGATOIRE RIVER AT TRINIDAD. MOST OTHER AREAS FROM AROUND COLORADO HAVE FORECASTS OF 5% TO 40% ABOVE NORMAL. SNOWMELT RUNOFF VOLUMES ALONG THE FRONT RANGE ARE ALL ABOVE AVERAGE. STREAMFLOW VOLUMES ALONG THE MAIN STEM OF THE RIO GRANDE AND RIO CHAMA RIVERS IN NEW MEXICO, ARE EXPECTED TO PRODUCE SLIGHTLY ABOVE AVERAGE VOLUMES. ALL RIVERS AND STREAMS THAT HAVE THEIR HEADWATERS ORIGINATING IN NEW MEXICO ARE FORECASTED TO PRODUCE BELOW NORMAL STREAMFLOWS RANGING FROM 57% OF AVERAGE FOR SANTA FE AND GALLINAS RIVERS FOR THE LOW, TO 73% OF AVERAGE FOR RED RIVER. LATE SEASON RUNOFF IS EXPECTED TO BE POOR EVEN IF NORMAL SUMMER PRECIPITATION IS OBSERVED. FARMERS AND RANCHERS WITH DIRECT DIVERSIONS SHOULD EXPECT LESS WATER DURING THE LATE SUMMER MONTHS. RESERVOIR WATER CAN BE USED TO SUPPLEMENT BELOW NORMAL STEAMFLOWS WHERE POSSIBLE.

BEST COPY AVAILABLE

Gunnison River Basin in Colorado

Mountain snowpack* (inches)

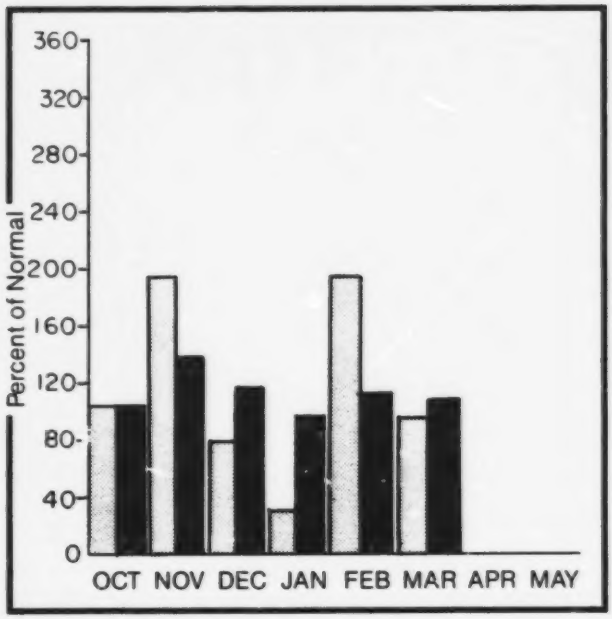


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ●———●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY
OUTLOOK

SNOWPACK FIGURES DROPPED TO 95% OF AVERAGE FOR APRIL FIRST, AND ONLY 86% OF LAST YEAR'S READINGS. LOWEST FIGURES OCCUR IN THE UNCOMPAGHRE BASIN, WHICH IS 87% OF AVERAGE. LOWER ELEVATION PRECIPITATION WAS BELOW AVERAGE IN MARCH AS WELL. EXPECTED STEAMFLOWS ARE ABOVE NORMAL WITH THE EXCEPTION OF THE UNCOMPAGHRE RIVER WHICH IS FORECAST AT 100% OF AVERAGE. RESERVOIR STORAGE IS 8% ABOVE THE APRIL FIRST AVERAGE, WHICH IS 94% OF LAST YEAR. SOIL MOISTURE IN IRRIGATED AREAS IS RATED AS IN GOOD CONDITION.

For more information contact your local Soil Conservation Service office.

BEST COPY AVAILABLE

GUNNISON RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
TAYLOR RIVER INF to Taylor Park Res	APR-SEP	115.0	144.0	[illegible]	[illegible]	[illegible]				
EAST RIVER at Almont	APR-SEP	202.0	246.0	[illegible]	[illegible]	[illegible]				
GUNNISON R INFLOW to Blue Mesa Res *	APR-SEP	803.2	980.0	[illegible]	[illegible]	[illegible]				
NORTH FORK OF GUNNISON *	APR-SEP	285.9	335.0	[illegible]	[illegible]	[illegible]				
SURFACE CREEK near Cedaredge	APR-SEP	17.3	20.0	[illegible]	[illegible]	[illegible]				
UNCOMPAHGRE RIVER at Colona	APR-SEP	133.8	135.0	[illegible]	[illegible]	[illegible]				
GUNNISON RIVER near Grand Junction *	APR-SEP	1265.0	1650.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE MESA	830.0	[illegible]	[illegible]	[illegible]
CRAWFORD	14.3	[illegible]	[illegible]	[illegible]
FRUITGROWERS	4.3	[illegible]	[illegible]	[illegible]
FRUITLAND	9.2	[illegible]	[illegible]	[illegible]
MORROW POINT	121.0	[illegible]	[illegible]	[illegible]
TAYLOR PARK	106.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

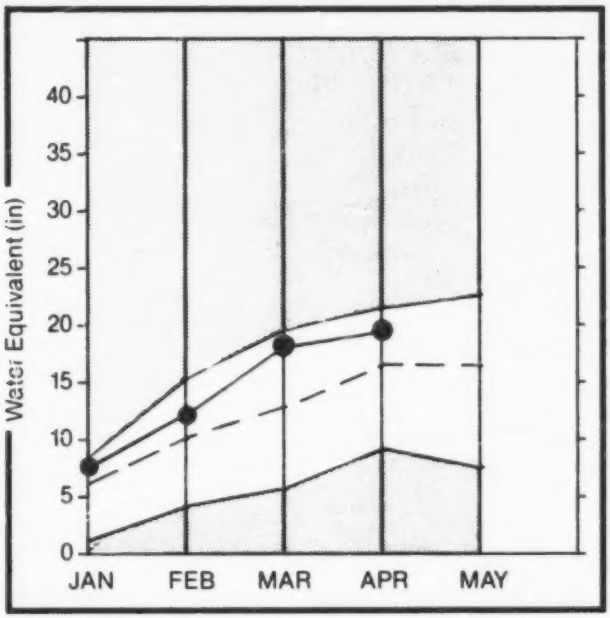
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
GUNNISON	12	[illegible]	[illegible]
SURFACE CREEK	3	[illegible]	[illegible]
UNCOMPAHGRE	4	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Colorado River Basin in Colorado

Mountain snowpack* (inches)

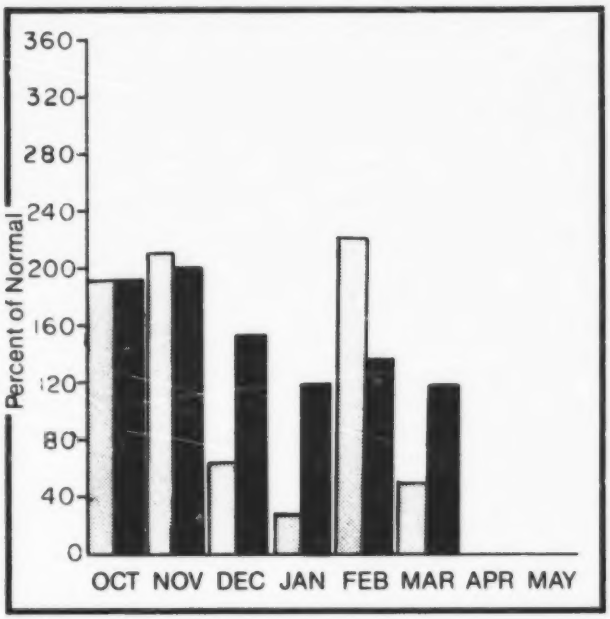


*Based on selected stations

Maximum ———— Average – – – –

Minimum ———— Current ●———●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY
OUTLOOK

SNOWPACK IN THE COLORADO RIVER BASIN HAS REMAINED ABOVE AVERAGE THIS MONTH. LOWEST SNOWPACK FIGURES ARE IN THE ROARING FORK AND WILLIAMS FORK BASINS, WHICH ARE NEAR AVERAGE. STREAMFLOW FORECAST FIGURES HAVE DECREASED ACCORDINGLY. HIGHEST FORECASTS ARE IN THE UPPER COLORADO RIVER TRIBUTARIES. THE REMAINING FLOWS ARE FORECAST AT SLIGHTLY ABOVE AVERAGE. RESERVOIR STORAGE IN THE BASIN IS 32% ABOVE AVERAGE, WHICH IS 96% OF LAST YEAR'S STORAGE LEVELS. SOIL MOISTURE IS CURRENTLY IN GOOD CONDITION.

For more information contact your local Soil Conservation Service office.

UPPER COLORADO RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLORADO RIVER INF to Granby Res *	APR-SEP	230.3	315.0	[illegible]	[illegible]	[illegible]				
WILLOW CK INF to Willow Creek Res	APR-SEP	51.7	75.0	[illegible]	[illegible]	[illegible]				
WILLIAMS FORK near Parshall	APR-SEP	62.5	88.0	[illegible]	[illegible]	[illegible]				
E. F. TROUBLESOME CR nr Troublesome	APR-SEP	19.3	26.0	[illegible]	[illegible]	[illegible]				
BLUE RIVER INFLOW to Dillon Res	APR-SEP	171.1	219.0	[illegible]	[illegible]	[illegible]				
BLUE R INF to Green Mountain Res *	APR-SEP	300.8	400.0	[illegible]	[illegible]	[illegible]				
EAGLE RIVER below Gypsum	APR-SEP	315.0	420.0	[illegible]	[illegible]	[illegible]				
COLORADO RIVER near Dotsero *	APR-SEP	1494.8	1950.0	[illegible]	[illegible]	[illegible]				
ROARING FORK at Glenwood Springs *	APR-SEP	733.5	875.0	[illegible]	[illegible]	[illegible]				
COLORADO RIVER near Cameo *	APR-SEP	2462.0	3380.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
DILLON	250.7	[illegible]	[illegible]	[illegible]
GRANBY	465.6	[illegible]	[illegible]	[illegible]
GREEN MOUNTAIN	139.0	[illegible]	[illegible]	[illegible]
HOMESTAKE	43.0	[illegible]	[illegible]	[illegible]
RUEDI	102.0	[illegible]	[illegible]	[illegible]
VEGA	32.0	[illegible]	[illegible]	[illegible]
WILLIAMS FORK	97.0	[illegible]	[illegible]	[illegible]
WILLOW CREEK	9.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

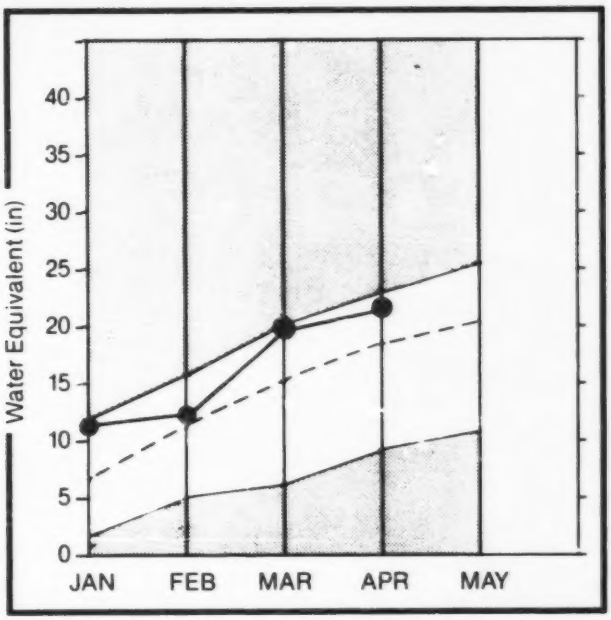
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
BLUE RIVER	7	[illegible]	[illegible]
COLORADO	20	[illegible]	[illegible]
PLATEAU	2	[illegible]	[illegible]
ROARING FORK	7	[illegible]	[illegible]
WILLIAMS FORK	4	[illegible]	[illegible]
WILLOW CREEK	2	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

South Platte River Basin in Colorado

Mountain snowpack* (inches)

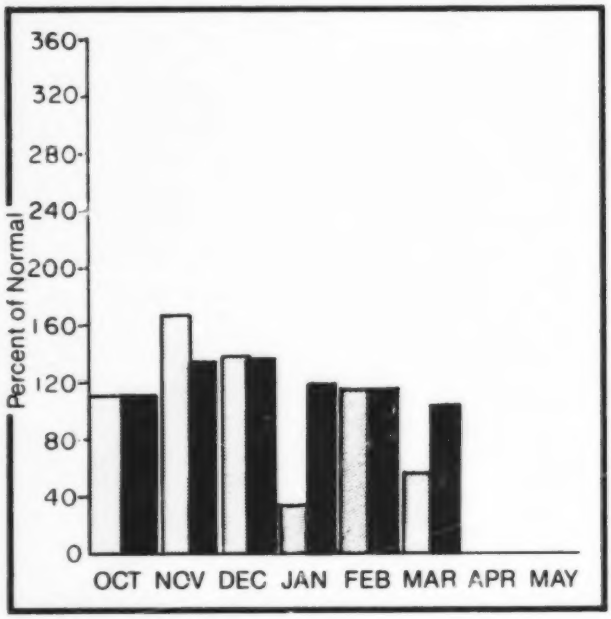


*Based on selected stations

Maximum ———— Average – – – –

Minimum ———— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK

A WARM AND DRY MARCH BROUGHT A DECLINE IN SNOWPACK AVERAGES THROUGHOUT THE BASIN. THE GREATEST DECLINE WAS SEEN IN THE BIG THOMPSON BASIN, WHICH DROPPED FROM 160% TO 126% OF AVERAGE DURING THE MONTH. BASINWIDE SNOWPACK IS CURRENTLY 10% ABOVE AVERAGE. THESE SNOWPACK FIGURES DO NOT REFLECT THE MAJOR SNOW STORM OCCURRING APRIL 2-3, WHICH BROUGHT RELIEF TO LACKING SOIL MOISTURE ACROSS THE PLAINS OF THE BASIN. STREAMFLOW FORECASTS DECREASED IN MARCH, HOWEVER REMAINED ABOVE AVERAGE THROUGHOUT THE BASIN.

For more information contact your local Soil Conservation Service office.

SOUTH PLATTE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SOUTH PLATTE RIVER at South Platte *	APR-SEP	197.0	234.0	[illegible]	[illegible]	[illegible]				
BEAR CREEK at Morrison	APR-SEP	28.7	36.1	[illegible]	[illegible]	[illegible]				
CLEAR CREEK at Golden *	APR-SEP	127.0	152.0	[illegible]	[illegible]	[illegible]				
SOUTH BOULDER CR nr Eldorado Springs	APR-SEP	42.1	52.5	[illegible]	[illegible]	[illegible]				
BOULDER CREEK at Orodell	APR-SEP	47.0	59.0	[illegible]	[illegible]	[illegible]				
ST. VRAIN CREEK at Lyons	APR-SEP	79.0	93.0	[illegible]	[illegible]	[illegible]				
BIG THOMPSON RIVER at Drake *	APR-SEP	114.0	156.0	[illegible]	[illegible]	[illegible]				
CACHE LA POUDRE R at Canyon Mouth *	APR-SEP	268.0	375.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
ANTERO	16.0	[illegible]	[illegible]	[illegible]
BARR LAKE	32.0	[illegible]	[illegible]	[illegible]
BLACK HOLLOW	8.0	[illegible]	[illegible]	[illegible]
BOYD LAKE	44.0	[illegible]	[illegible]	[illegible]
CACHE LA POUDRE	10.0	[illegible]	[illegible]	[illegible]
CARTER	113.5	[illegible]	[illegible]	[illegible]
CHAMBERS LAKE	9.0	[illegible]	[illegible]	[illegible]
CHEESMAN	79.0	[illegible]	[illegible]	[illegible]
COBB LAKE	34.0	[illegible]	[illegible]	[illegible]
ELEVEN MILE	97.8	[illegible]	[illegible]	[illegible]
EMPIRE	38.0	[illegible]	[illegible]	[illegible]
FOSSIL CREEK	12.0	[illegible]	[illegible]	[illegible]
GROSS	43.0	[illegible]	[illegible]	[illegible]
HALLIGAN	6.4	[illegible]	[illegible]	[illegible]
HORSETOOTH	143.5	[illegible]	[illegible]	[illegible]
JACKSON	35.0	[illegible]	[illegible]	[illegible]
JULESBURG	28.0	[illegible]	[illegible]	[illegible]
LAKE LOVELAND	14.0	[illegible]	[illegible]	[illegible]
LONE TREE	9.0	[illegible]	[illegible]	[illegible]
MARIANO	6.0	[illegible]	[illegible]	[illegible]
MARSHALL	10.0	[illegible]	[illegible]	[illegible]
MARSTON	18.0	[illegible]	[illegible]	[illegible]
MILTON	24.0	[illegible]	[illegible]	[illegible]
POINT OF ROCKS	70.0	[illegible]	[illegible]	[illegible]
PREWITT	33.0	[illegible]	[illegible]	[illegible]
RIVERSIDE	58.0	[illegible]	[illegible]	[illegible]
SPINNEY MOUNTAIN	48.0	[illegible]	[illegible]	[illegible]
STANDLEY	42.0	[illegible]	[illegible]	[illegible]
TERRY LAKE	8.0	[illegible]	[illegible]	[illegible]
UNION	13.0	[illegible]	[illegible]	[illegible]
WINDSOR	19.0	[illegible]	[illegible]	[illegible]
HORSECREEK	16.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

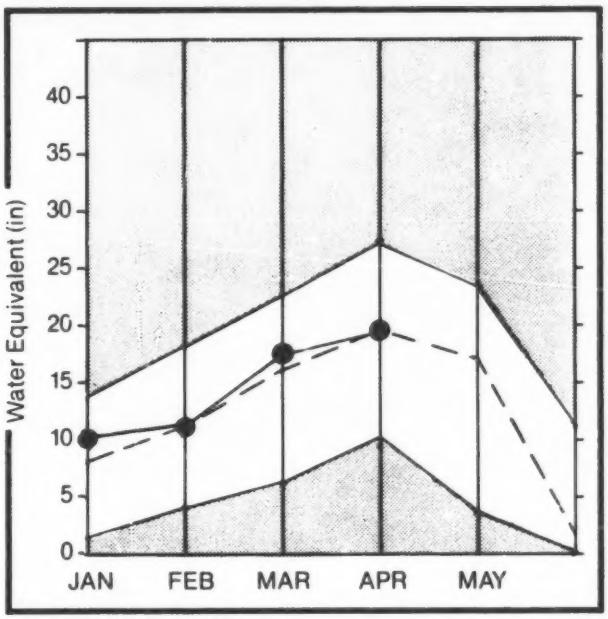
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
BIG THOMPSON	7	[illegible]	[illegible]
BOULDER	5	[illegible]	[illegible]
CACHE LA POUDRE	8	[illegible]	[illegible]
CLEAR CREEK	5	[illegible]	[illegible]
SAINT VRAIN	3	[illegible]	[illegible]
SOUTH PLATTE	7	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Yampa, White and North Platte River Basins in Colorado

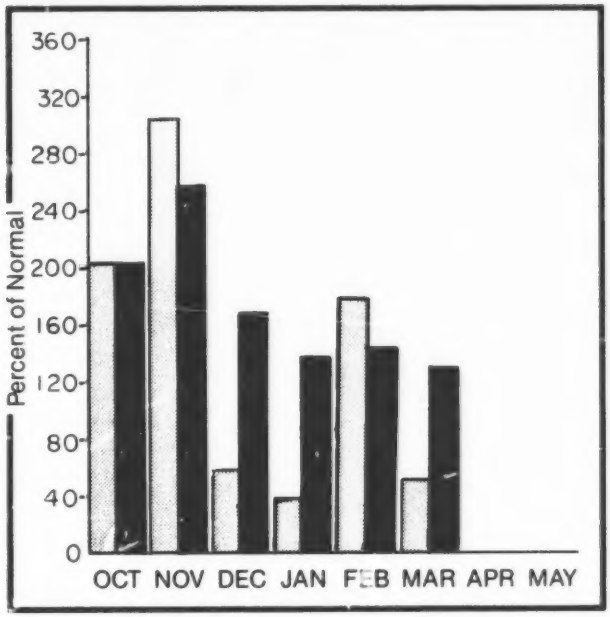
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK

SNOWPACK STATISTICS HAVE REMAINED ABOVE AVERAGE FOR APRIL FIRST. SNOWPACK IN THE LARAMIE BASIN IS HIGHEST AT 138% OF AVERAGE, WHILE THE YAMPA BASIN IS AT 107% OF AVERAGE, AND THE WHITE RIVER BASIN IS AT 105% OF AVERAGE. EXPECTED STREAMFLOWS WILL BE ABOVE AVERAGE THROUGHOUT ALL THE BASINS. THE HIGHEST FLOWS ARE FORECAST ON THE LARAMIE RIVER. LOWER ELEVATION PRECIPITATION WAS ONLY 48% OF AVERAGE FOR MARCH. SOIL MOISTURE IN IRRIGATED AREAS HAS BEEN RATED AS IN GOOD CONDITION.

For more information contact your local Soil Conservation Service office.

//

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
LARAMIE RIVER near Woods	APR-SEP	132.0	175.0	132	150	107				
NORTH PLATTE RIVER at Northgate	APR-SEP	262.0	330.0	125	148	104				
YAMPA RIVER at Steamboat Springs	APR-SEP	284.2	340.0	119	138	104				
ELK RIVER at Clark	APR-SEP	207.2	260.0	125	139	112				
YAMPA RIVER near Maybell	APR-SEP	956.0	1150.0	120	137	103				
LITTLE SNAKE RIVER at LILY	APR-SEP	356.8	440.0	123	144	105				
WHITE RIVER near Meeker	APR-SEP	304.2	385.0	126	144	111				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

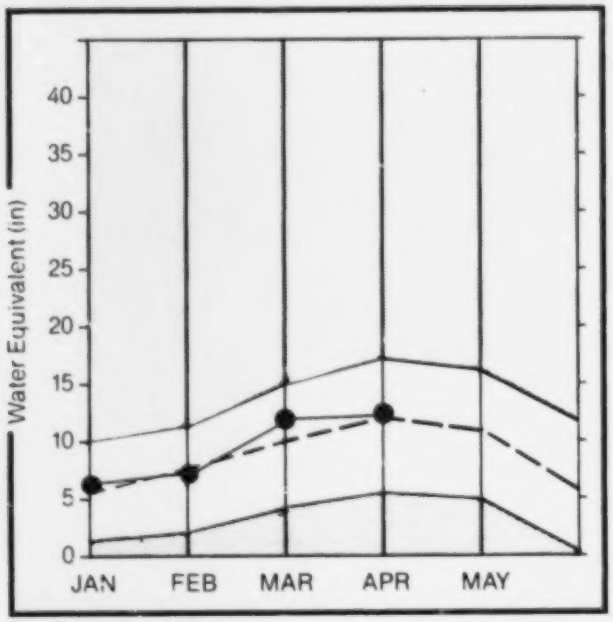
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
ELK	2	122	101
LARAMIE	3	143	130
NORTH PLATTE	5	124	110
WHITE	2	104	105
YAMPA	7	114	107

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Arkansas River Basin in Colorado

Mountain snowpack* (inches)

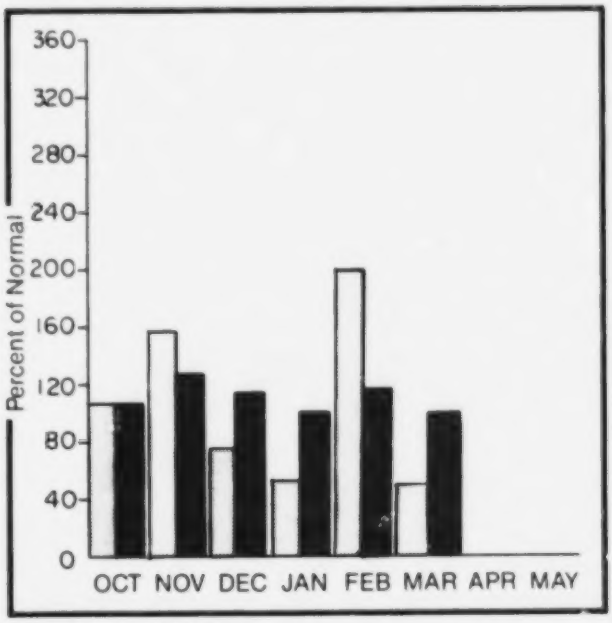


*Based on selected stations

Maximum ———— Average – – – –

Minimum ———— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY

BASIN SNOWPACK DECREASED FROM 102% OF AVERAGE ON MARCH FIRST. TO ONLY 85% OF AVERAGE ON APRIL FIRST. SNOWPACK IN THE CUCHARAS BASIN IS CURRENTLY ONLY 54% OF AVERAGE. MANY LOWER ELEVATION PRECIPITATION STATIONS HAVE REPORTED ONLY 50% OF NORMAL FOR MARCH. RESERVOIR STORAGE IS NEARLY FOUR TIMES THE AVERAGE. 103% OF LAST YEAR'S FIGURES. STREAMFLOW FORECASTS CALL FOR NEAR AVERAGE FLOWS ALONG THE MAIN STEM OF THE ARKANSAS RIVER. WHILE BELOW NORMAL FLOWS ARE EXPECTED IN THE SMALLER TRIBUTARIES.

For more information contact your local Soil Conservation Service office.

ARKANSAS RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	30 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CHALK CREEK	APR-SEP	21.5	22.0	[illegible]	[illegible]	[illegible]				
ARKANSAS RIVER at Salida *	APR-SEP	200.0	221.0	[illegible]	[illegible]	[illegible]				
GRAPE CREEK near Westcliffe	APR-SEP	16.0	14.0	[illegible]	[illegible]	[illegible]				
ARKANSAS RIVER above Pueblo *	APR-SEP	278.0	300.0	[illegible]	[illegible]	[illegible]				
CUCHARAS RIVER near La Veta	APR-SEP	11.0	8.0	[illegible]	[illegible]	[illegible]				
HUERFANO RIVER near Redwing	APR-SEP	15.0	12.0	[illegible]	[illegible]	[illegible]				
PURGATOIRE RIVER at Trinidad *	APR-SEP	36.0	24.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
ADOBE	70.0	[illegible]	[illegible]	[illegible]
CLEAR CREEK	11.0	[illegible]	[illegible]	[illegible]
GREAT PLAINS	150.0	[illegible]	[illegible]	[illegible]
HOLBROOK	7.0	[illegible]	[illegible]	[illegible]
HORSE CREEK	28.0	[illegible]	[illegible]	[illegible]
JOHN MARTIN	616.0	[illegible]	[illegible]	[illegible]
LAKE HENRY	8.0	[illegible]	[illegible]	[illegible]
MEREDITH	42.0	[illegible]	[illegible]	[illegible]
PUEBLO	354.0	[illegible]	[illegible]	[illegible]
TRINIDAD	167.0	[illegible]	[illegible]	[illegible]
TURQUOISE	126.6	[illegible]	[illegible]	[illegible]
TWIN LAKES	86.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

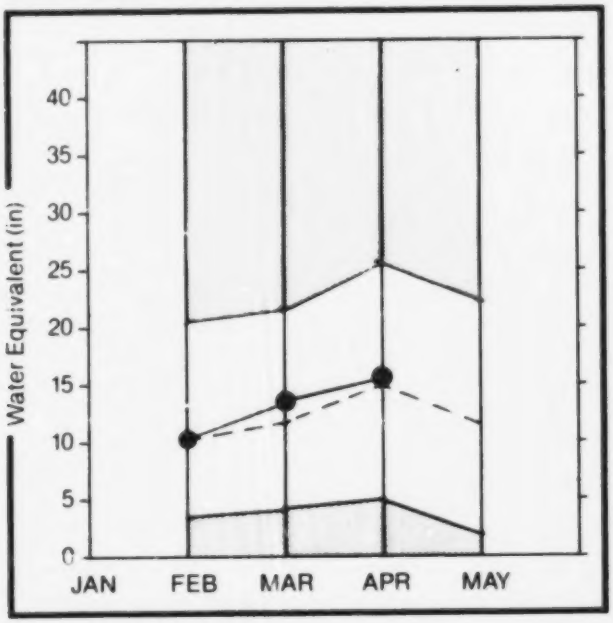
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
ARKANSAS	9	[illegible]	[illegible]
CUCHARAS	3	[illegible]	[illegible]
PURGATOIRE	1	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Rio Grande Basin in Colorado

Mountain snowpack* (inches)

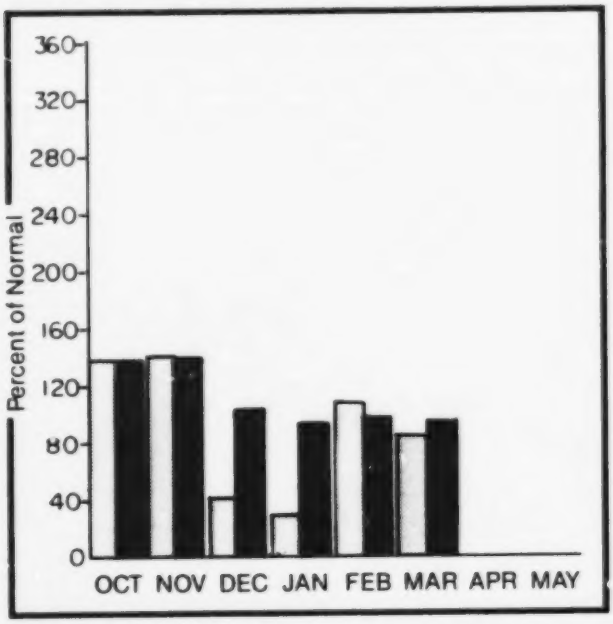


*Based on selected stations

Maximum ——— Average - - - -

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

[illegible]

SNOWPACK FIGURES IN THE RIO GRANDE BASIN OF COLORADO DROPPED DURING MARCH TO BELOW AVERAGE. CURRENTLY, THE BASIN SNOWPACK READINGS ARE 98% OF AVERAGE, WHICH IS 90% OF LAST YEAR'S READINGS. FORTUNATELY, THE RELENT ABOVE AVERAGE WATER YEARS HAVE INCREASED THE WATER STORED IN RESERVOIRS TO NEARLY 3 TIMES THEIR AVERAGE. LOWER ELEVATION PRECIPITATION FOR MARCH WAS ONLY 80% OF AVERAGE FOR MANY STATIONS. STREAMFLOW FORECASTS ARE FOR NEAR AVERAGE TO SLIGHTLY BELOW AVERAGE RUNOFF THIS YEAR.

For more information contact your local Soil Conservation Service office.

UPPER RIO GRANDE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SAGUACHE CREEK nr Saguache	APR-SEP	30.0	27.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE at Thirty Mile Bridge *	APR-SEP	126.0	145.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE at Wagon Wheel Gap *	APR-SEP	310.0	350.0	[illegible]	[illegible]	[illegible]				
SOUTH FK OF RIO GRANDE at South Fork	APR-SEP	127.0	140.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE near Del Norte *	APR-SEP	494.0	560.0	[illegible]	[illegible]	[illegible]				
ALAMOSA CREEK above Terrace Res	APR-SEP	66.0	75.0	[illegible]	[illegible]	[illegible]				
LA JARA CREEK near Capulin	MAR-JUL	7.8	8.0	[illegible]	[illegible]	[illegible]				
TRINCHERA WATER SUPPLY *	APR-JUL	26.0	21.0	[illegible]	[illegible]	[illegible]				
CONEJOS RIVER near Mogote	APR-SEP	195.0	215.0	[illegible]	[illegible]	[illegible]				
LOS PINOS near Ortiz	APR-SEP	69.0	65.0	[illegible]	[illegible]	[illegible]				
SAN ANTONIO RIVER at Ortiz	APR-SEP	15.2	13.0	[illegible]	[illegible]	[illegible]				
CULEBRA CREEK at San Luis *	APR-SEP	18.0	10.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CONTINENTAL	27.0	[illegible]	[illegible]	[illegible]
PLATORO	60.0	[illegible]	[illegible]	[illegible]
RIO GRANDE	51.0	[illegible]	[illegible]	[illegible]
SANCHEZ	103.0	[illegible]	[illegible]	[illegible]
SANTA MARIA	45.0	[illegible]	[illegible]	[illegible]
TERRACE	18.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

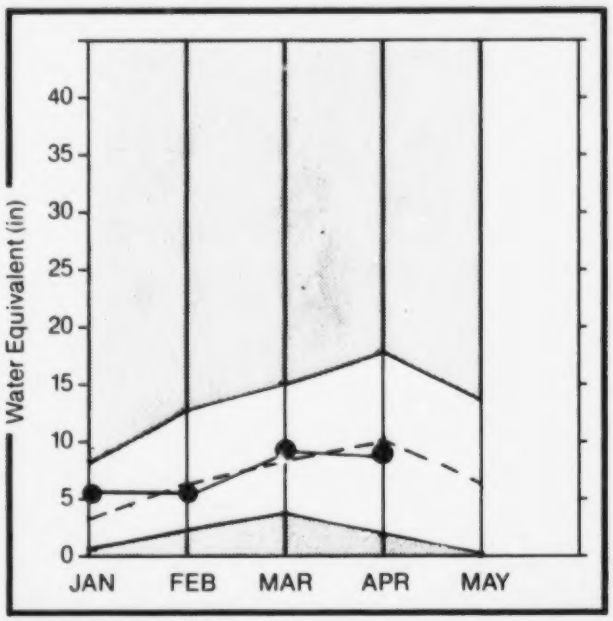
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
ALAMOSA	1	[illegible]	[illegible]
CONEJOS	6	[illegible]	[illegible]
CULEBRA	4	[illegible]	[illegible]
RIO GRANDE, CO	13	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Rio Grande Basin in New Mexico

Mountain snowpack* (inches)

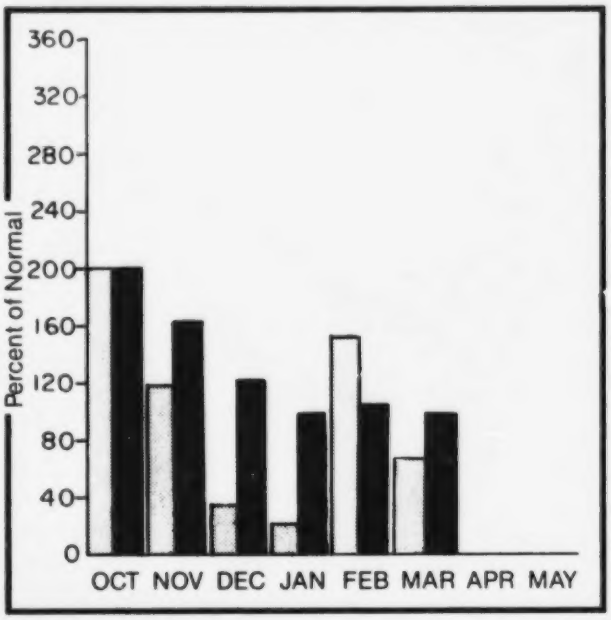


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

DRY CONDITIONS PERSISTED THOUGHOUT THE LOWER RIO GRANDE BASIN DURING MARCH. TOTAL BASIN SNOWPACK FIGURES DROPPED TO ONLY 58% OF AVERAGE FOR APRIL FIRST. FORECASTED STREAMFLOWS FOR STREAMS ORIGINATING IN NEW MEXICO ARE ALL BELOW NORMAL. HOWEVER THE MAIN STEM OF THE RIO GRANDE IS EXPECTED TO FLOW NEAR AVERAGE. SNOWPACK FIGURES MAY INCREASE SLIGHTLY DUE TO A MAJOR STORM WHICH OCCURRED IN THE FIRST WEEK OF APRIL. RESERVOIR STORAGE IS CURRENTLY MORE THAN FOUR TIMES THE NORMAL FOR APRIL FIRST.

For more information contact your local Soil Conservation Service office.

LOWER RIO GRANDE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COSTILLA CRK at Costilla *	MAR-JUL	19.0	13.0	[illegible]	[illegible]	[illegible]				
GALLINAS CREEK near Montezuma	MAR-JUL	7.0	3.0	[illegible]	[illegible]	[illegible]				
JEMEZ RIVER near Jemez	MAR-JUL	40.0	25.0	[illegible]	[illegible]	[illegible]				
PECOS RIVER at Pecos	MAR-JUL	45.0	22.0	[illegible]	[illegible]	[illegible]				
RED RIVER at Mouth	MAR-JUL	30.0	21.0	[illegible]	[illegible]	[illegible]				
RIO CHAMA at El Vado	MAR-JUL	208.0	210.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE at Otowi *	MAR-JUL	600.0	610.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE at San Marcial *	MAR-JUL	420.0	430.0	[illegible]	[illegible]	[illegible]				
RIO HONDO near Valdez	MAR-JUL	15.0	9.0	[illegible]	[illegible]	[illegible]				
RIO PUEBLO de TAOS bl Los Cordovas	MAR-JUL	27.0	16.0	[illegible]	[illegible]	[illegible]				
SANTA CRUZ RIVER at Cundiyo	MAR-JUL	14.0	7.0	[illegible]	[illegible]	[illegible]				
SANTA FE near Santa Fe	MAR-JUL	2.9	1.8	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
LAKE AVALON	6.0	[illegible]	[illegible]	[illegible]
CABALLO	344.0	[illegible]	[illegible]	[illegible]
CONCHAS	330.0	[illegible]	[illegible]	[illegible]
EL VADO	195.4	[illegible]	[illegible]	[illegible]
ELEPHANT BUTTE	2195.0	[illegible]	[illegible]	[illegible]
LAKE McMILLAN	34.0	[illegible]	[illegible]	[illegible]
SANTA ROSA	447.0	[illegible]	[illegible]	[illegible]
SUMNER	102.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

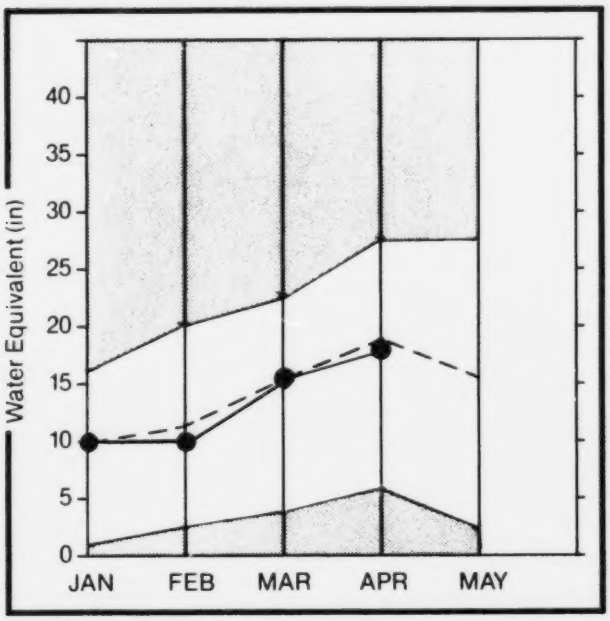
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
PECOS RIVER	1	[illegible]	[illegible]
RED RIVER	2	[illegible]	[illegible]
RIO CHAMA	3	[illegible]	[illegible]
RIO GRANDE, NM	17	[illegible]	[illegible]
RIO HONDO	0	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

San Miguel, Dolores, Animas and San Juan Basins in Colorado and New Mexico

Mountain snowpack* (inches)

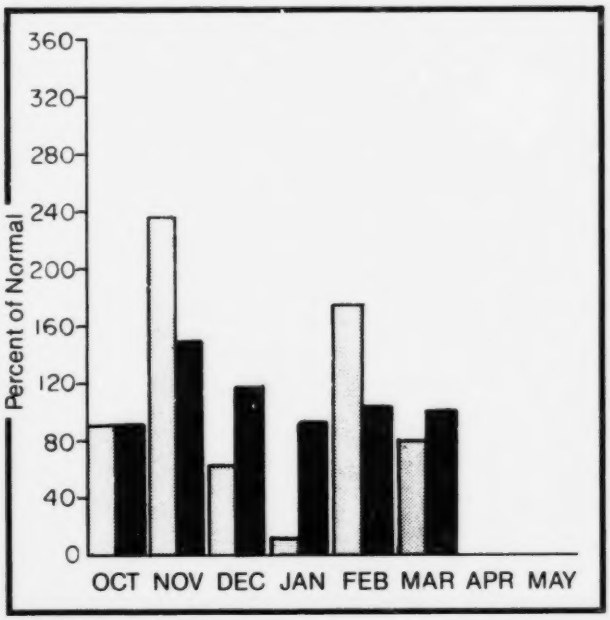


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ●———●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY
[illegible]

SNOWPACK IN THE SAN JUAN BASIN HAS REMAINED ABOVE AVERAGE THIS MONTH AT 111% OF NORMAL. SNOWPACK IN THE ANIMAS AND DOLORES BASINS DECREASED SLIGHTLY DURING MARCH TO 97% AND 94% OF AVERAGE, RESPECTIVELY. FORECASTED STREAMFLOW VOLUMES SHOULD BE NEAR TO SLIGHTLY ABOVE AVERAGE PROVIDING NORMAL PRECIPITATION OCCURS DURING APRIL AND MAY. RESERVOIR STORAGE IS CURRENTLY 56% ABOVE AVERAGE, AND 88% OF LAST YEAR. ANY SHORTAGES IN WATER SUPPLIES MAY BE ALLEVIATED FROM THE EXTRA STORED WATER SUPPLIES.

For more information contact your local Soil Conservation Service office.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SAN MIGUEL RIVER at Placerville	APR-SEP	131.2	133.0	[illegible]	[illegible]	[illegible]				
DOLORES RIVER at Dolores	APR-SEP	256.0	280.0	[illegible]	[illegible]	[illegible]				
SAN JUAN RIVER at Carracos	APR-SEP	400.7	490.0	[illegible]	[illegible]	[illegible]				
PIEDRA RIVER at Arboles	APR-SEP	225.4	255.0	[illegible]	[illegible]	[illegible]				
LOS PINOS RIVER at Bayfield *	APR-SEP	219.0	230.0	[illegible]	[illegible]	[illegible]				
INFLOW TO NAVAJO RESERVOIR *	APR-JUL	729.0	850.0	[illegible]	[illegible]	[illegible]				
ANIMAS RIVER at Durango	APR-SEP	458.2	500.0	[illegible]	[illegible]	[illegible]				
FLORIDA RIVER at Bondad	APR-SEP	37.0	38.0	[illegible]	[illegible]	[illegible]				
LA PLATA RIVER at Hesperus	APR-SEP	26.1	28.0	[illegible]	[illegible]	[illegible]				
MANCOS RIVER near Towaoc	MAR-JUL	28.2	29.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
GROUNDHOG	21.7	[illegible]	[illegible]	[illegible]
JACKSON GULCH	10.0	[illegible]	[illegible]	[illegible]
LEMON	40.0	[illegible]	[illegible]	[illegible]
NARRAGUINNEP	19.0	[illegible]	[illegible]	[illegible]
NAVAJO	1696.0	[illegible]	[illegible]	[illegible]
VALLECITO	126.0	[illegible]	[illegible]	[illegible]

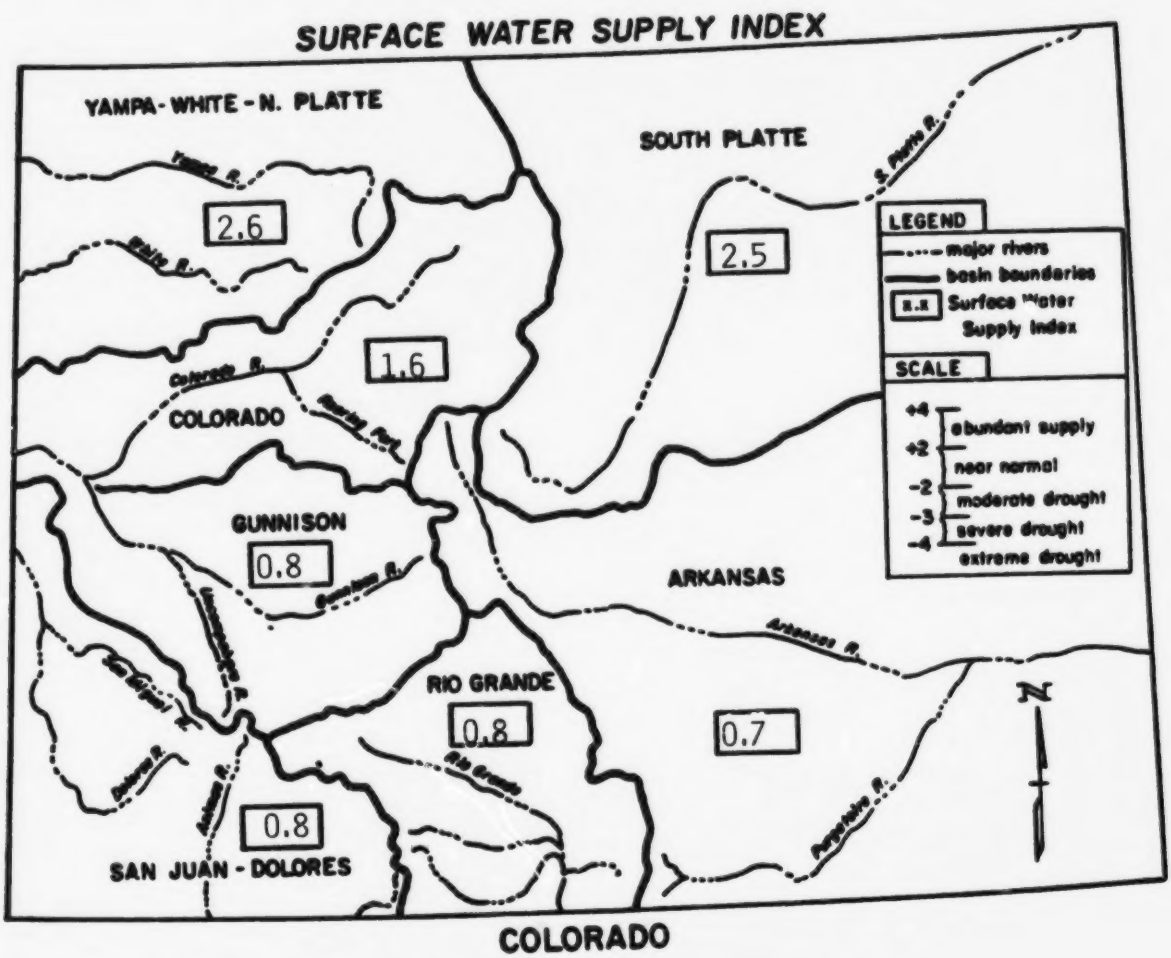
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
ANIMAS	6	[illegible]	[illegible]
DOLORES	6	[illegible]	[illegible]
SAN JUAN	6	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Date: APRIL 1, 1986



The Surface Water Supply Index (SWSI) is a weighted value derived for each major basin which generally expresses the potential availability of the forthcoming season's water supply. The components used in computing the index are reservoir storage, snowpack water equivalent, and precipitation. The SWSI number for each basin ranges from a -4.00 (prospective water supplies extremely poor) to a +4.00 (prospective water supplies plentiful). The SWSI number is only a general indicator of surface water supply conditions. Further data analyses may be required in specific situations to more fully understand the impacts of abnormally dry or wet conditions suggested by the SWSI. Development of the SWSI has been a cooperative effort between the Colorado State Engineers' Office and the Soil Conservation Service.

BEST COPY AVAILABLE

OTHER INFORMATION

WIND EROSION REPORT:

GROWING WHEAT WAS RAPIDLY DEPLETING THE STORED MOISTURE. AND A LACK OF RAIN OR SNOW OVER MUCH OF THE AREA DURING THE VEGETATIVE STAGE WOULD OF HAD A SERIOUS EFFECT ON YIELDS HAD NOT A HEAVY WET SNOW AND RAIN OCCURRED OVER MOST OF EASTERN COLORADO ON APRIL 4, AFTER THE WIND EROSION REPORT FOR MARCH WAS PREPARED. THE EXCEPTION TO THIS GENERAL STORM WAS SOUTH EASTERN COLORADO COUNTIES. BACA COUNTY DID NOT RECEIVE ANY PRECIPITATION AND REMAINS VERY DRY. OTHER AREAS IN SOUTH EASTERN COLORADO RECEIVED SPOTTY MOISTURE FROM THE STORM. EROSIVE WIND SPEEDS HAVE BEEN LOWER THAN NORMAL THIS SPRING, WHICH HAS CONTRIBUTED TO A LOWER ACREAGE OF LAND DAMAGED COMPARED TO TOTAL ACREAGE IN CONDITION TO BLOW. LAND REPORTED AS DAMAGED INCREASED FROM 201,570 ACRES IN FEBRUARY, TO 321,084 ACRES IN MARCH, AND CROPS OR COVER DESTROYED INCREASED FROM 26,840 ACRES TO 47,119 ACRES. LAND IN CONDITION TO BLOW HAD ONLY A SLIGHT INCREASE FROM 2,014,842 ACRES IN FEBRUARY, TO 2,242,617 ACRES IN MARCH. WITH THE ADVENT OF GOOD MOISTURE OVER MOST OF EASTERN COLORADO, WINTER WHEAT SHOULD MAKE RAPID GROWTH AND PROVIDE A GOOD COVER TO REDUCE FURTHER SOIL BLOWING THIS SPRING.

BEST COPY AVAILABLE

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State	Colorado State Engineer
	Colorado State Soil Conservation Board
	New Mexico State Engineer
	Colorado State University Experiment Station
	Rocky Mountain Forest and Range Experiment Station
	New Mexico Department of Game and Fish
	University of Colorado, INSTAAR
Federal	U.S. Department of Agriculture
	Forest Service
	Soil Conservation Service
	U.S. Department of the Interior
	Bureau of Reclamation
	Geological Survey
	National Park Service
	U.S. Department of Commerce
	NOAA, National Weather Service
	NOAA, National Environmental Satellite Service
	U.S. Department of Defense
	Army Engineer Corps
	National Aeronautics and Space Administration
	Goddard Space Flight Center
Local	Colorado Public Service Company
	Public Service Company of New Mexico
	City of Denver
	City of Boulder
	City of Greeley
	City of Fort Collins
	Arkansas Valley Ditch Association
	Colorado River Water Conservation District
	Farmers Reservoir and Irrigation Company
	San Luis Valley Irrigation District
	Santa Maria Reservoir Company
	Costilla Land Company
	Montezuma Irrigation Company
	Uncompahgre Valley Water Users' Association
	Twin Lakes Reservoir and Canal Company
	Trinchera Irrigation Company
	Aspen Skiing Corp.
	Colorado Fuel and Iron Corp.
	Climax Molybdenum Corp.
	Copper Mountain Ski Area
	Lake Eldora Corp.
	Vail Associates, Inc.
	Taylor Lumber and Land Company
	Idarado Mining Corp.
Private	Otto Goemmer, Colorado
	Moreno Ranch, New Mexico

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

BEST COPY AVAILABLE